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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DETWILER, BRIAN J

ART UNIT	PAPER NUMBER
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2173

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/054,029	Applicant(s) FORMAN ET AL.	
	Examiner Brian J. Detwiler	Art Unit 2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Independent claims 1 and 10 detail pieces of computer code in the form of a program, which provides nothing more than the manipulation of basic mathematical constructs, the paradigmatic “abstract idea.” As the Supreme Court has made clear, “[a]n idea of itself is not patentable,” Rubber-Tip Pencil Co. v. Howard, 20 U.S. (1 Wall.) 498,507 (1874); Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759; taking several abstract ideas and manipulating them together adds nothing to the basic equation. Furthermore, the computer program is not embodied in any computer readable medium so as to be able to impart the functionality to a computer or article of manufacture. Independent claims 17, 25, and 27 are further examples of abstract ideas, i.e. method claims that do not provide a tangible result.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 8-13, 17, 19, 22, 23, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,627,980 (Schilit et al).

Referring to claims 1, 10, 17, 25, and 27, Schilit discloses in column 5: lines 15-24 a multiple level hierarchical data structure. In column 5: lines 25-67, Schilit further discloses receiving information related to a navigation goal and relating information indicative of a goal node to at least first level nodes of the hierarchy structure. In column 5: lines 52-67 and column 6: lines 1-31, Schilit discloses classifying said information and providing a recommendation as to at least one of said choices more likely to lead towards said goal, highlighting said at least one choice by making it a bracket member, receiving a selection from a user, and iteratively navigating through the data structure until the goal node is reached. Schilit provides a detailed example of one embodiment of the invention in column 6: lines 32-65.

Referring to claim 3, as discussed above, Schilit discloses in column 5: lines 15-24 that the structure is a hierarchy.

Referring to claim 4, Schilit discloses in column 5: lines 52-67 and column 6: lines 1-31 navigating by searching in a descending fashion level by level through the hierarchy.

Referring to claim 5, Schilit discloses in column 5: lines 52-67 and column 6: lines 1-31 that feedback is iterative, refining currently available choices in each iteration.

Referring to claim 6, the computer code for receiving a user's initial selection and determining what the next available choices are can be considered a classifier program.

Referring to claim 8, Schilit discloses in column 6: lines 13-31 storing historical usage data and learning from said historical usage data to improve the means for classifying.

Referring to claim 9, Schilit discloses in column 5: lines 52-67 and column 6: lines 1-31 that the providing of feedback indicative of said recommendation probabilistically facilitates navigation through the structure towards said navigation goal.

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Referring to claim 11, Schilit discloses in column 5: lines 52-67 and column 6: lines 1-65 computer code for determining if the current choice is indicative of the goal node, displaying to the user whether said current choice is the goal node, and directing the user to the goal node if the current choice is correct or otherwise iteratively providing at least one refined option choice to said user based on reclassifying the information with the current choice until the goal node is reached.

Referring to claims 12 and 22, Schilit discloses in column 5: lines 64-67 computer code for analyzing the information and each current choice and for storing data indicative of the analyzing such that later iterations of providing at least one refined option accounts for said data indicative of analyzing.

Referring to claims 13 and 23, Schilit discloses in column 5: lines 52-67 and column 6: lines 1-31 computer code for highlighting at least one currently available choice, wherein the at least one currently available choice is graphically highlighted by making it a bracket member, and wherein said highlighting is indicative of a suggestion that said at least one currently available choice is more likely to achieve the goal node of the navigating.

Referring to claim 19, Schilit discloses in column 5: lines 52-67 and column 6: lines 1-31 presenting a plurality of currently available next choices according to the next level of the organizational structure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,627,980 (Schilit et al).

Referring to claims 2 and 18, while Schilit fails to explicitly state accessing an organizational structure from among a plurality of organizational structures, the examiner submits that it is notoriously well known in the state of the art that hierarchical trees can be split into smaller trees level by level such that one could effectively access one organization structure from among a plurality of organizational structures. The examiner takes OFFICIAL NOTICE of this teaching. It would in fact be beneficial to separate extremely large organizational structures into smaller ones to improve the speed at which the structures are accessed or to accommodate storage across multiple locations. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made access one organizational structures from among a plurality of organizational structures because doing so would have been beneficial in scenarios with extremely large data structures that may need to be stored at multiple locations.

Claims 7, 15, 20, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,627,980 (Schilit et al) and U.S. Patent No. 6,489,968 (Ortega et al).

Referring to claims 7, 15, and 20, Schilit fails to disclose recommending likely choices that are not the next available choices in the hierarchy or organizational structure. Ortega, though, discloses in the summary means for “elevating” certain nodes within a tree such that nodes that are more likely to be target nodes can be presented to the user prior to navigating

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through each hierarchical level. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recommend likely choices that are not the next available choices in the hierarchy or organizational structure as taught by Ortega in combination with the teachings of Schilit because it would advantageously provide users with the opportunity to reach a target node without having to navigate through all of the hierarchical levels, thus saving time.

Referring to claim 26, Schilit disclose that if the target node is selected then ending the comparing, but fails to disclose that if the target node is not selected then re-comparing the first data with one of the likely nodes that is selected and providing further feedback data indicating likely subsidiary nodes and said likely node that is selected such that at least one of said likely subsidiary nodes is a target node predicted to be the goal node from a probabilistic analysis during said re-comparing, and wherein the feedback data allows selection between the likely subsidiary nodes and the target node. Ortega, though, discloses in the summary means for “elevating” certain nodes within a tree such that nodes that are more likely to be target nodes can be presented to the user prior to navigating through each hierarchical level. These elevated nodes correspond to the claimed subsidiary nodes, which allow the user to jump right to the target node. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to indicate likely subsidiary nodes as taught by Ortega in combination with the teachings of Schilit because it would advantageously provide users with the opportunity to reach a target node without having to navigate through all of the hierarchical levels, thus saving time.

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Claims 14, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,627,980 (Schilit et al) and U.S. Patent No. 5,754,938 (Herz et al).

Referring to claims 14 and 24, Schilit fails to disclose providing probability data for a plurality of currently available choices via a graphical display. Herz, though, discloses in column 68: lines 2-56 means for visually marking choices with a special color or typeface, or displaying an image or number indicating the likely level of interest. Clearly, it is desirable to reach the goal node as quickly as possible, and the additional feedback disclosed by Herz aids the user in making efficient choices. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide probability data for a plurality of currently available choices as taught by Herz in combination with the teachings of Schilit so that users can make more informed choices thus reaching the goal node in a more efficient manner.

Referring to claim 21, Schilit fails to disclose displaying only a recommended subset of choices to the user. Herz, though, discloses in column 68: lines 41-46 that “uninteresting” or least likely choices can suppressed so that the user is not even aware of these choices. Herz provides an example in which a user with children can advantageously apply negative weight in order to suppress vulgar choices from the display. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made do display only a recommended subset of choices to the user as taught by Herz in combination with the teachings of Schilit so that the user is not bothered with unnecessary or unwanted information as suggested by Herz.

Response to Arguments

Applicant's arguments filed 2 December 2004 have been fully considered but they are not persuasive. Applicant discusses several differences in structure and methodology that purportedly distinguish applicant's invention from that of Schilit. These differences, while helpful in providing a better understanding of Applicant's invention, fail to address the specific rejections over Schilit in view of the claim language. Applicant highlights a plurality of claim elements that are purportedly missing from Schilit, but fails to specifically explain why Schilit's invention fails to anticipate these elements. It would appear that applicant's arguments are based solely on the notion that the examiner misinterpreted the claims. Particularly, applicant asserts that the examiner misinterpreted the limitation "organizational structure". In response, the examiner submits that there is a fundamental difference between interpreting a claim in light of the specification and reading limitations from the specification into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The examiner agrees with applicant's assertion that certain terms in a computer process can carry a definition that is more specific than a dictionary definition. The examiner, however, must interpret the claims in the broadest reasonable fashion so as to protect not only the public, but also the invention of the applicant. In the instant case, the examiner maintains that the claimed limitations were interpreted broadly and most certainly reasonably in view of the specification and the knowledge available to one of ordinary skill in the art. The examiner further maintains that the rejection of claims 1-27 is proper for at least these reasons.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Detwiler whose telephone number is 571-272-4049. The examiner can normally be reached on Mon-Thu 8-5:30 and alternating Fridays 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Cabeca can be reached on 571-272-4048. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bjd


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